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## WHAT IS CLAIMED IS:

1. A method for fabricating a porous silica sphere comprising:

heat-treating a silica gel by increasing its temperature at a speed of less than 90  $^{\circ}$ C per minute up to 1050 or 1200  $^{\circ}$ C; and

maintaining the temperature for a predetermined time.

- 2. The method of claim 1, wherein the silica gel has pores with a size of about 20 to 70 angstroms, and a pore volume of around 0.3 to 1.1 ml/g.
- 3. The method of claim 1, wherein the heat-treatment is performed at an average temperature elevating speed ranging from 5 °C to 90 °C per minute.
- 4. The method of claim 1, wherein the heat-treatment is performed at an average temperature elevating speed ranging from 10 °C to 70 °C per minute.
- 5. The method of claim 1, wherein heat treatment is performed in a rotary tube furnace.
- 6. A method for fabricating a porous silica sphere comprising a heat treatment process, wherein silica gel is subjected to a first heat-treatment at 400 to 900 °C, and is subjected to a second heat-treatment at 1050 to 1200 °C.
- 7. The method of claim 6, wherein the first heat treatment is performed for 20 to 60 minutes, and the second heat treatment is performed for 20 to 60 minutes.
- 8. The method of claim 6, wherein the heat treatment is performed using at least two rotary tube furnaces.
  - 9. The method of claim 6, which comprises putting the silica gel into a first tube furnace;

subjecting it to a first heat-treatment by increasing the temperature at an average speed of 35 to 70  $^{\circ}$ C per minute up to 700  $^{\circ}$ C, and then maintaining it for 10 to 20 minutes; and

subjecting it to a second heat-treatment in the second tube furnace at 1100 to 1150 °C, then maintaining it for 20 to 60 minutes.